CHAPTER II

THE CULTURAL LANDSCAPE OF NEGROS

This chapter will present, in bold outline, the cultural landscape of Negros Island with particular emphasis on the local area in which Siaton municipality and Barrio Caticugan are located. The material will place Caticugan in its larger setting, providing background for the succeeding chapters on agriculture, fishing and other aspects of material economy. The barriofolk, with their meager technology and crude implements, are in intimate association with the seasonal rhythms of their land. The southwest monsoon brings moisture-laden air masses beginning in April and climaxing in August. The consequent rains begin the major agricultural cycle and end the fish corral period. The end of the southwest monsoon initiates a dry season with diminishing food supplies and consequently increases the food gathering activities of the barriofolk. The backward technology and cultural perspectives of the people hinder their exploitation of the latent potentialities of their land. Life in Caticugan is better understood in the light of a summary of landform regions, climatic conditions, edaphic factors, population distribution and transportation facilities of Negros Island.

original Visayan tongue from which stem all other Visayan dialects. He states that prior to the arrival of Cebuano-speaking Filipinos, the dialect of eastern Leyte and Samar was basically Bicol and that of Panay was mainly Tagalog, the present national language of the Philippines. The Cebuano intrusion resulted in a blended Tagalog-Cebuano dialect in Panay and a Bicol-Cebuano blend in Leyte and Samar. The original dialects of Cebu, Bohol and Negros were displaced by the flood of emigrant Cebuanos.[17]

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Major Landform Regions of Negros

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The West Negros plain of Negros Occidental province is ranked among the larger plains of the Philippines and dominates an important part of the island's economy. (See Plate V.)[1] This moderately level plain is almost 100 miles in length and has a width of almost 30 miles in the locality of Bacolod. The plain has been subdivided into northern, west-central and southern sections.

The northern subdivision of this plain, with swampy coastal areas often covered with mangroves, is narrower than the southern or west-central subdivisions. Along the interior borders of the northern subdivision, the plain rises to join the central mountain system. The major crop, covering most of the land, is sugar cane. The west-central subdivision, one of the most important

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[17] Ibid., pp.174-8.

1 [See p.38, cat. 133 -- ANALYST]

20: Hart E-5 (195.) 1954 OA1 Philippines
Central Bisayan OA14

PLATE V

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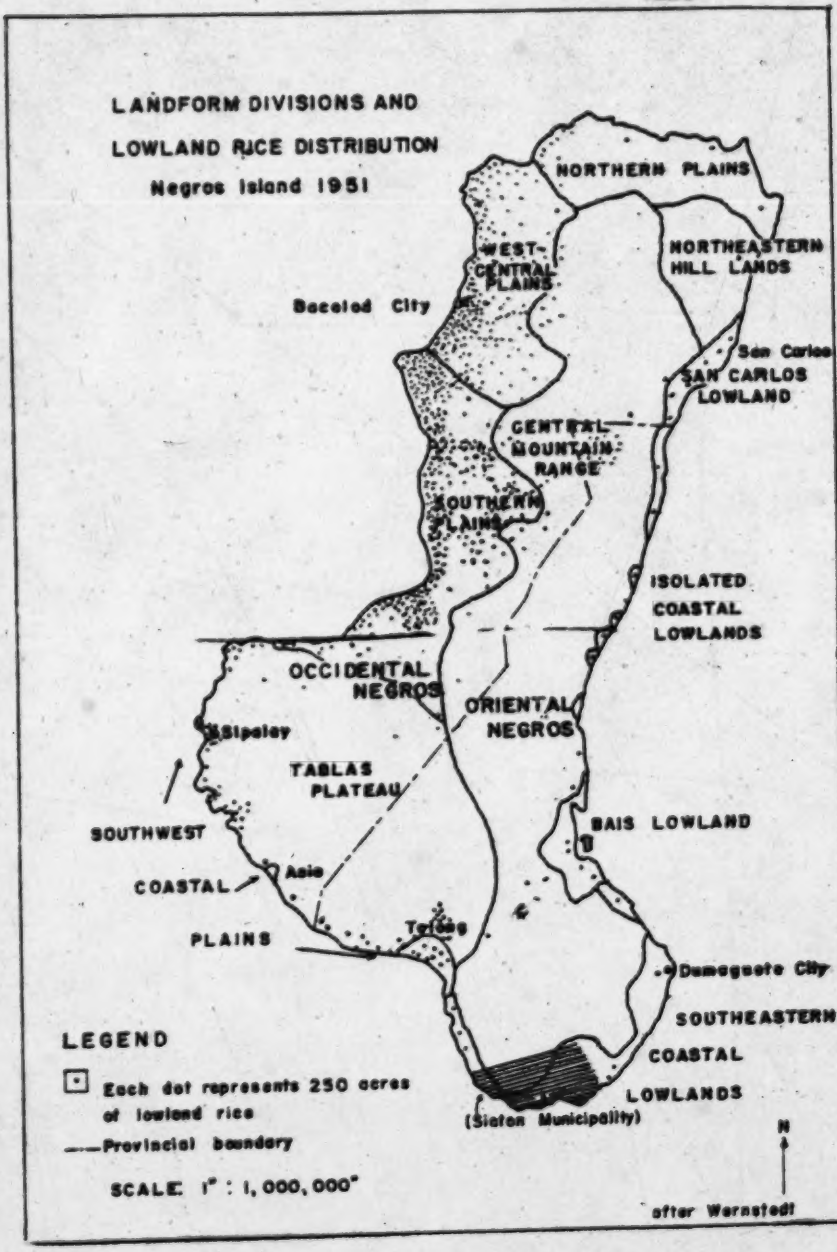

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economic regions of Negros, is devoted almost entirely to sugar cane except for a fringe of lowland rice along the southwestern coast. The land is relatively level along the coast but undulation occurs as the plain approaches the mountains. Only the northern and southern subdivisions of the plain have drainage problems.

The southern division of the west Negros plain has the greatest amount of acreage devoted to lowland rice, although it is also a sugar cane area. Here flows the Ilog, the longest river in Negros, navigable for five miles by lightdraft ships. The west Negros plain is the most important area in the island from an agricultural point of view. Associated are large towns, adequate roads, narrow-gauge railways (for transporting cane to the mills), and a dense population.

The Tablas plateau in southwestern Negros, a thinly inhabited and little known area, is relatively isolated from the rest of the island. Here occurs the only break in the national road system encircling Negros. While once a plateau surface, the Tablas area is now a hilly upland, deeply dissected. Perhaps with the exception of [161] the central mountains, the Tablas plateau is the most undeveloped area in Negros. The few settlements are located along the coast.

The Southwest Coastal lowlands, extending westward from Tolong to the southern part of the plain of west Negros are a series of disconnected flood plains created where the rivers deposit their sediments on reaching the

sea. There are no roads in the region, which is isolated from the rest of Negros by the Tablas plateau. The majority of settlements, such as Asia and Sipalay, are found along the coast. 133 311

Siaton municipality is located in the Southeastern Coastal lowland which stretches from the westward boundary of Tolong to the Bais lowland in the north. Over 80 miles in length, its width varies from less than a mile to not more than five miles. In some localities between Siaton and Tolong, the hills almost reach the sea with scant space for the road. Small flood plains have been built by the rivers in this region.

> Steep slopes, coupled with meager rainfall and porous soils, have precluded the growing of either sugar cane or rice, except in small local areas, so that the substitute crop of corn assumes a greater importance.[18]

Siaton municipality begins with the Bondo ("Mound") plateau, just south of Zamboanguita poblacion where the National Road turns west and climbs to an elevation of about 400 feet. Bondo is a relatively level platform, moderately dissected by small streams dry except during the rainy season. From the bluffs along the sea, the plateau rises, first gently, and then with increasing undulation as it blends into the southeastern volcanic lands. Bondo is dotted with isolated dwellings, scattered fields of corn, camotes and upland rice. A spur from the National Road runs south to Barrio Bonbonon.

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[18] Wernstedt, op. cit., p.20.

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Descending from the plateau, the National Road passes through the small riverine plain of the Canaway River. The plain is about three miles long and nearly a mile wide. The valley is surrounded by hills on the west and north, Bondo on the east and the sea on the south. The largest acreage of lowland rice is grown here on the best rice land in Siaton municipality. A low finger-ridge to the west separates the Canaway and Siaton rivers north of Siaton poblacion.

East of the Siaton River the lowland tapers along the coast. South of Sitio Balaso dead coconut trees stand in the surf and the people speak of how "the land is sinking." The shoreline near Barrio Giliga-on, however, gives evidence of recent uplifting. From Siaton poblacion to the western boundaries of the municipality, the larger barrios like Bonawon and Giliga-on are located in small alluvial deltas.

The Siaton River valley extends north about six miles. Above Sitio Dolog, the river rushes noisily through a boulder-strewn bed, encased by mountains that rise abruptly on both sides. (See Plate VI.)[1] The largest area of level cultivated land is on the west side of the river where Barrio Sandolot is located. East and west of the valley are rolling hills covered with secondary growth and large areas of cogon grass. There are no roads into this area. During the rainy season travel is quite difficult, since fording the river in flood often is impossible.

1 [See p 42, cat. 133 or 311 - Analyst]

20: Hart E-5 (1951) 1954 OA1 Philippines
Central Bisayan OA 14 PLATE VI P. 42

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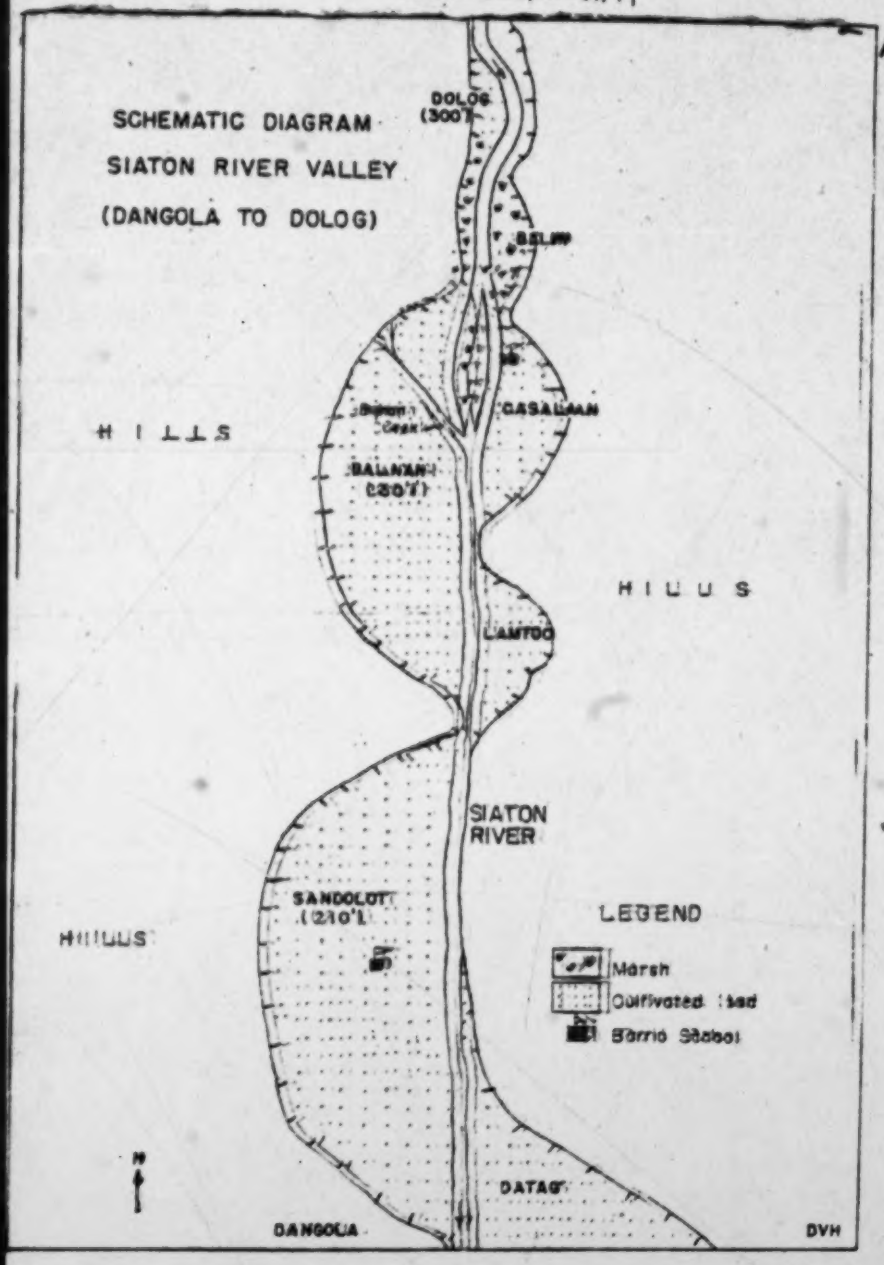

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The Bais lowland, a sugar cane region, was created by the confluence of several large rivers, e.g., Panambalan, Lotan, Montenegro, and Tanjay. Small valley floors extend back into the mountains, up each river, making a many-fingered interior boundary for this lowland. This lowland was probably one of the areas first [167] settled, and in 1845 had the densest population in Negros, according to Buzeta.[19]

The Eastern Coastal plains are like a broken chain, linking the San Carlos and the Bais lowlands.

> Wherever a river breaches the mountain wall and debouches onto the coast, a small alluvial plain or delta is formed. On the larger of these plains are located the municipalities, such as Guihulngan, La Libertad, Tayasan, and Ayungon. Where there is limited level land, small barrios or sitios of only a few houses are found. Since many of these plains are relatively isolated from one another, the agriculture has tended to be mainly a subsistence economy.[20]

Guihulngan is a small interisland port with daily shipping connections with Cebu.

The San Carlos lowland extends about 30 miles along the eastern coast of Negros. To the lowland's west the mountains rise abruptly to elevations of four to six thousand feet. This alluvial lowland is almost entirely

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[19] Manuel Buzeta and Felipe Bravo, Diccionario Geográfico, Estadístico, Histórico, de las Islas Filipinas. Madrid, 1851, pp.555-9. Wernstedt, op. cit., p.91, Plate I, has an 1845 population map of Negros.

[20] Wernstedt, op. cit., p.19.

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planted with sugar cane. San Carlos is a regular stop for many of the inter-island ships from Mindanao and Manila while the port facilities at San Carlos sugar mill service overseas shipping..

The Northeastern Hill Lands of Negros Occidental, located north of the San Carlos lowland, is a region of low rolling hills with steep slopes yet not sufficiently steep to prevent caingin agriculture. Small basin-like plains nestled among the hills and equally small flood plains constitute the major portion of level land.

Negros' backbone is the Central Mountain range running from north to south and covered with dense vegetation, except where caingin agriculture has produced cogon grass areas. This mountainous region of Negros, the home of primitive groups, remains an unbroken barrier to east-west travel except for one road that winds through a two-thousand-foot pass south of Canlaon Volcano. Because of landslides this road is often closed during the southwest monsoon season.

The crestline of the Central Mountain range lies east to the center of Negros and slopes toward the eastern coast in many localities. In the north-central and southeastern parts of the range are a number of volcanic cones, the highest being Canlaon. The Central Mountain range is a source of timber and of many forest products such as resins and rattan.

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> Skirting the flanks of almost all of the central mountain mass is a band or transition zone between the steeper mountain slopes and the low-lying coastal plains. This is a belt that is generally made up of low hills. In almost every case the slopes of these foothills have been burned by cultivators and are now either devoted to crops or have been left in the tall cogonal grasses which quickly take over cleared areas that are not permanently cultivated...The river valleys are often over five hundred feet in depth, and present a tremendous obstacle to travel 'across the grain' of the land.[21]

In summary, the most economically important and developed agricultural regions of Negros today are its plains, particularly the fertile West Negros plain. Negros Oriental is less fortunate in having more mountains and fewer plains; the latter are often small, mainly disconnected lowlands, separated by eastern spurs of the Central Mountain range or rugged foothills. The southwestern portion of Negros is a hilly upland, between one and two thousand feet in elevation, relatively isolated and undeveloped. The source of the major rivers of Negros, severely eroded and covered with dense forests, is the Central Mountain range serving as a stout backbone for the island. This range terminates in a southeastern mountain knot near Siaton municipality. As Negros' landforms are not absolute determinants, they have exerted a powerful influence on land use. The landforms give meaning to the agricultural patterns and cultural diversities of the people of Negros.

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[21] Wernstedt, op. cit., p.22.

shower. As Plate VII[1] indicates, the mountainous area northwest of Siaton poblacion has over one hundred inches of rain. Several times during 1951, the Siaton River became a raging torrent overnight, although no rain had fallen in the vicinity of the poblacion. People coming from Balanan and Casala-an would report that it had rained abundantly during the night. 132

Wernstedt established three precipitation regimes in Negros. The first region is located in western and southwestern Negros with a pronounced dry season from December to April and a wet season during the remainder of the year.[27] While the Central Mountain range prevents the northeast monsoon and trade winds from effectively reaching this region, it is open to the southwest monsoon which brings heavy rain. The precipitation of the first regime is most favorable to the growth of sugar cane and rice. Siaton municipality falls into this regime with more than four months of less than 2.4 inches of rain.[28] 132 311.

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[27] The average monthly precipitation (in inches), over an 18-year period, for Binalbagan estate, Negros Occidental, located in this region, is: January (2.3); February (1.6); March (1.8); April (2.1); May (8.3); June (8.0); July (15.5); August (12.2); September (12.7); October (11.2); November (7.8); December (3.9). Total annual precipitation: 87.3 inches. Wernstedt, op. cit., p.35.

[28] Wernstedt's original classification placed Siaton in the second precipitation regime. However, since the 1951 and 1952 precipitation records have become available, they show a 6-year period with four months of less than 2.4 inches of rain.

1 [See p.50, cat.132 -- Analyst]

20: Hart E-5 (195.) 1954 OAI Philippines
Central Bisayan OA 14

The soils and lack of water supplies are perhaps the two most important reasons why more corn than rice is grown in Siaton; the droughty period, limited level land and inadequate transportation facilities do not encourage the cultivation of sugar cane. 132 311

The second precipitation regime is the eastern littoral of Negros Oriental, between Zamboanguita and Calatrava municipalities. Here there is no definite maximum precipitation period but a one- to three-month drought period. The drought normally occurs between December and the beginning of May and discourages both sugar cane and rice but favors corn. This precipitation regime is the corn center of Negros.[29]

Northern Negros, from Calatrava to Victorias municipalities, with an enclave in the Bais lowland, is the third precipitation regime. This area has no dry season but often a pronounced rainfall maximum period. The distinction in land utilization between the first and third precipitation regimes is the length of the harvest and milling seasons. For example, Victorias central (the mill where the cane is processed), located in the third precipitation regime, mills cane for the

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[29] The average monthly precipitation (in inches) for Dumaguete City, located in the second precipitation regime, for a 29-year period, is: January (4.4); February (3.3); March (2.0); April (1.9); May (4.5); June (5.5); July (5.5); August (4.3); September (5.4); October (7.9); November (6.1); and December (5.2). Total annual precipitation: 55.9 inches. Wernstedt, op. cit., p.35.

entire year while most of the centrals in the first regime are limited to a 6-month processing period.[30]

Vegetation

Most of Negros originally was covered with forests. Today about 66 per cent of the land surface of the Philippines is still forested.[31] Older residents of Barrio Bonbonon (Siaton) remember when the forests, which then abounded with deer, covered large areas of Bondo. Today the typical tree of this grassy plateau is the stubby talongon (Ginelina philippensis Cham.) The forests were once nearer to Caticugan where rattan could be gathered without long walks to the mountains. The western and eastern plains of Negros also were once forested. As the population of the island increased the most desirable land for cultivation was cleared of trees and planted with rice, corn, sugar cane and other crops.

Approximately 50 per cent of Negros' primary forests have been alienated by the people in their centuries of

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[30] The average monthly precipitation (in inches) for Hacienda Bilbao, Manapla, located in the third precipitation regime, for a 19-year period, is: January (7.9); February (4.8); March (4.8); April (3.); May (7.1); June (6.3); July (7.3); August (6.1); September (6.9); October (11.9); November (14.6); and December (9.2). Total annual precipitation: 90.0 inches. Wernstedt, op. cit., p.36.

[31] Reginald G. Hainsworth and Maymont T. Moyer, Agricultural Geography of the Philippine Islands: A Graphic Survey. Washington, D.C., United States Department of Agriculture, Office of Foreign Agricultural Relations, December, 1945, p.12.

assault on the land. Of the land alienated in Negros, which represents either open or agricultural land, only 80 per cent is now cultivated. The remainder of this land is idle, in pasture, or covered with various grasses, principally the coarse cogons (Imperata exaltata) or the wild cane (Saccharum spontaneum), the latter called tigbao in the Visayas and talahib in Tagalog.

The commercial forests of Negros represent some of the best timber lands in the Philippines (See Plate IX.)[2] Covering about 38 per cent of the island, nearly 70 per cent of the commercial forests are of the Dipterocarpaceae family, large trees usually more than 100 feet in height.[32]

The Insular Lumber Company located at Fabrica (Negros Occidental) with a daily output of 125,000 board-feet is the world's largest hardwood lumber mill. Other lumber mills are located at Victorias, Himamaylan, Cauayan, San Carlos, Tanjay and Tolong.[33] These mills

[32]Florencio Tamesis and Luis Aguilar, Important Commercial Timbers of the Philippines: Their Properties and Uses. Popular Bulletin No. 32. Manila, Department of Agriculture and Natural Resources, Bureau of Printing, 1951, p.15. While there are more than 3,000 arborescent species in the Philippines, 75 per cent of the standing timber belongs to the lauan family (Dipterocarpaceae).

[33]M. M. Alicante and others, Soil Survey of Negros Occidental Province, Philippines. Soil Report No. 14. Manila, Department of Agriculture and Natural Resources, Bureau of Printing, 1951, p.13.

2 [See p.59, cat. 137 --ANALYST]

planted mainly with sugar cane or rice. The most extensive and productive of these lowland soils, the Silay series, is not found in Siaton municipality, although the Zamboanguita, Isabela, and San Manuel soil series are represented. (See Plate X.)[1] 134

About 12 per cent of Negros is covered with rolling upland soils of a sedimentary parentage, usually found in the piedmont areas away from the coast. Because of the steep slopes on which they are located, drainage is often excessive and erosion is severe. Igneous-derived upland soils cover almost 25 per cent of Negros. The soils in this latter group have strong lateritic characteristics and due to the pronounced external drainage, gullying and sheet erosion are widespread.

The least important, economically, but the most extensive of all the soil groups of Negros, are the hill and mountain soils which occupy about 30 per cent of the island. This soil group is found mainly in the central mountains. Most of these soils are covered by tropical rain forests which are the watersheds for Negros' major rivers and very little of them have been cultivated. Where scattered cainginș exist on these soils severe erosion has resulted.

Lack of contour planting on slopes, the clearing of steep slopes and hillsides, and faulty soil and crop management are a few reasons for soil erosion in Negros. In some areas the erosion is quite serious. In [311]

1 [See p. 64, Cat. 134--Analyst]

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[3?]

these highways are completed, new areas of land now almost inaccessible will be available for agriculture.[50]

In 1951 there were almost 264 miles (553.7 kilometers) of all classes of national and provincial roads in Negros Oriental. Siquijor subprovince had 80 miles (129.7 kilometers) of roads. About 66 per cent of Negros Oriental's roads (excluding Siquijor) are first class highways.[51] The roads are maintained by the caminero system.

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[50] Whether this land will be available to the small farmer when it becomes accessible is questionable. Already large blocks of undeveloped land in these areas have been purchased by wealthy individuals in both Negros and Cebu. Another difficulty in the construction of new roads is reflected in the following excerpt of a situation which is not unique to Negros Oriental. "In Dumaguete City several months ago, we were also informed of a glaring case of abuse of public works funds. Our informant stated: 'We have a congressman in this province who had a road constructed out of public works money. There is absolutely nothing wrong with building a highway. But what shocks us in this case is that the road leads to his hacienda!'" Leon O. Ty, "The Liberals Lost a Weapon," Philippines Free Press, XLIII, No. 30, (July 26, 1952), p.5.

[51] "Semi-Annual Report of Road Diagram and Bridge List Revised as of December 31, 1951," District Engineer's Office, Dumaguete, Negros Oriental, Philippines, n.d. Ozalid report. First class roads, normally surfaced with concrete, asphalt, macadam, or gravel, are well-graded, drained, and constantly maintained. These roads are passable at all times except during typhoon periods. Second class roads are fairly graded, partially or naturally surfaced, and intermittently maintained. While bridges and culverts are usually complete, there are temporary structures. These roads are continually passable during the dry season but more or less impassable during the rainy season. Third class roads are usually narrow, poorly graded, and generally impassable during the rainy season. Domingo Guanio, Bureau of Public Works Manual. Manila, Bureau of Printing, 1935, p.153. While this is the official classification, road maps are often inaccurate for some second class roads in Negros Oriental are as adequate as first class roads.

barrio district population for the province is close to that of Siaton, although the latter's poblacion is about one-third smaller than the average provincial poblacion. Siaton's poblacion is more a large barrio than a poblacion.

TABLE I

	Barrio District Population (1948)		Poblacion Size (1948)	
	Location	Population	Location	Population
NEGROS ORIENTAL				
Average	-	1010	-	3378
Largest	Calamba (Guihulngan)	19097	Tanjay	12503
Smallest	Kaidiocan (Valencia)	112	Valencia	806
SIATON				
Average		943	-	2364
Largest	Bonawon	2393	-	-
Smallest	Mantiquil	239	-	-

Agricultural Regions of Negros

The preceding material has presented some of the major aspects of Negros' cultural landscape. This section will be devoted to the agricultural regions. Greater emphasis will be given to corn and rice areas since this information will better place Siaton in proper perspective.

Southern and eastern Negros, mainly Negros Oriental, is a region of corn and coconuts; western Negros' major crops are sugar cane and rice. While the

physical environment does not dictate use of the land, limitations due to soils, precipitation, and topography encourage particular utilization patterns. The relative freedom man has in his relation to the land depends upon cultural factors. Steep slopes, otherwise non-cultivable, may be terraced and planted, given the necessary skills. Plant breeding may produce quick-maturing or drought-resistant varieties, and may open new localities for food production. These corrective techniques require capital and advanced technical knowledge that the average farmer of Negros lacks.

The soils and precipitation regimes of most of eastern Negros favor corn cultivation, whereas in western Negros these factors encourage sugar cane and rice production. The topography of eastern Negros with its narrow littoral and tiny riverine floodplains does not encourage mechanized agriculture. In Negros Occidental mechanized equipment is widely used because of the broad plains, larger fields and a crop which lends itself to mechanization.

Most of the inhabitants of eastern Negros originally came from the corn-growing island of Cebu while those of Negros Occidental are largely from Panay where rice outweighs corn. The Panayanos came to Negros' plains as rice farmers or workers in sugar cane fields. The Cebuanos found a well-drained limestone littoral suited to the grain they knew best. While these factors

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influenced the present land use patterns of Negros, the areal distribution of crops today appears to have been influenced more forcefully by physical rather than cultural factors.

Corn-Coconut Regions of Eastern Negros

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The major maize-producing areas in the Philippines are the Visayan Islands of Negros, Cebu, Siquijor, Bohol, Leyte, Masbate and the Cagayan valley (Luzon), and Mindanao.[79] The Philippines is self-sufficient in this grain and it is called the "poor man's rice."[80] For the crop year 1951-52 rice accounted for 42 per cent of all Philippine crops; 18 per cent of the cultivated land was devoted to corn.[81] Corn is the "principal foodstuff of about 30 per cent of the population" of the Philippines.[82]

[177]

The Spaniards first introduced corn in the 16th century; it appeared to have spread rapidly in the Visayas. The two corn-coconut regions of Negros are agricultural phenomena unique in Asia, for here a non-indigenous food crop dominates the agricultural landscape. The adaptability of corn to the physical

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[79] Hainsworth and Moyer, op. cit., p.52.

[80] Hugo H. Miller, Principles of Economics Applied to the Philippines. New York, Ginn and Company, 1932, p.212.

[81] Central Bank of Philippines Statistical Bulletin IV, No. 1 (March 1952). Manila, Bureau of Printing, p.99.

[82] "Philippine Corn Production High," Foreign Crops and Markets, LXV, No. 20 (November 17, 1952), p. 455.

environment made possible the expansion of agricultural frontiers into localities once considered non-agricultural.

> Cebu, Bohol, Siquijor, Negros Oriental and other smaller neighboring Visayan islands constitute an outlier from the Western Hemisphere in what is predominately thought of as a rice-producing region. Without maize many of the lands now supporting fairly dense populations...could support only a small fraction of their present-day population at the same standard of living.[83]

Siaton municipality is within one of the two corn-coconut regions of eastern Negros. The Southern Corn-Coconut region, that includes Siaton, is separated from the northern region by the Bais lowland enclave. The total area of this southern region is about 558 square miles of which only 68 square miles (or 12 per cent) are under active cultivation. Of the land cultivated, nearly 46 per cent is devoted to corn or crops raised in association with this grain. Corn and coconuts account for 73 per cent of the total cultivated land. (See Plate XVI.)[1]

The predominance of corn over rice in these two regions probably is not due to the Filipinos' preference for the former but to geographic factors such as coral-line limestone soils and a precipitation regime that favor corn production over rice. The Southern Corn-Coconut region is an "area of poorer lands, poorer soils, poorer crops and a lower standard of living for the farmers."[84]

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[83] Wernstedt, op. cit., p. 130.

[84] Wernstedt, op. cit., p. 104.

1 [See p. 105, cat. 311 - Analyst]

20: Hart E-5 (1951) 1954 OA1 Philippines
Central Bisayan OA14

PARTS XVI p. 109

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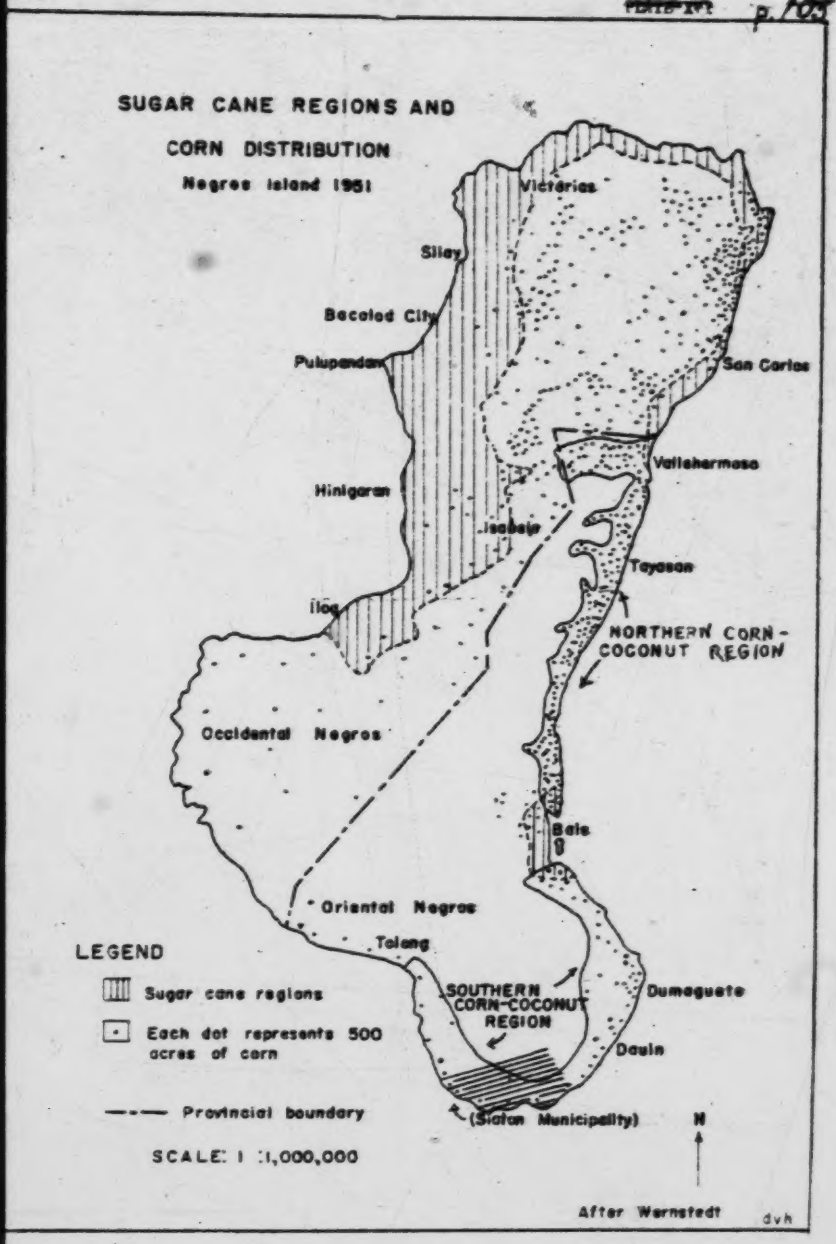

The visible aspects of prosperity are much greater in western than in eastern Negros.

The distribution of cultivated land among the eight major crops of the southern region is shown in Table XI.[85]

TABLE XI

Percentage of Land of Each Municipality Devoted to the Major Crops, 1950-51 Southern Corn-Coconut Region

Municipality	Corn	Coconuts	Sugar	Rice	Roots (a)	Vegetables	Beans	Fruits
Pamplona	89	32	19	11	5	*	1	2
Amlan	30	59	*	1	5	*	1	2
Sibulan	56	20	1	*	12	2	3	6
Dumaguete	57	20	1	*	12	2	3	1
Valencia (b)	31	15	0	4	5	4	1	1
Bacong	53	27	*	5	7	4	2	1
Dauin	71	15	0	4	4	1	2	2
Zamboanguita	42	24	*	23	5	2	3	1
SIATON	46	17	0	23	6	1	2	2
Sta. Catalina	39	22	4	17	4	2	2	9
Tanjay (c)	12	33	41	11	1	*	*	1

* Indicates less than 1 per cent.
(a) Roots include camotes, gabi, cassava, and peanuts.
(b) In Valencia 38 per cent of the cultivated land is devoted to abaca.
(c) Tanjay included to illustrate transition from corn-coconut region to sugar cane region.

Dauin is the most extreme example of a municipality within the southern region with 71 per cent of its cultivated land devoted to corn and 86 per cent occupied by either corn or coconuts.

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[85] Wernstedt, op. cit., p. 106.

when copra prices fall school enrollments decrease. For the most part, the Chinese control the buying and selling of copra. Their trucks come from Dumaguete to pick up copra from stores where Filipinos sell their small crops.

The Northern Corn-Coconut region begins in the south with Manjuyod municipality and continues to the north to Canlaon and Vallehermoso municipalities. A northern extension of this region includes Negros Occidental's eastern littoral. Both the southern and northern municipalities of this region are transitional to sugar cane agriculture. This northern region is larger than the Southern Corn-Coconut area; the former has about 743 square miles of which 239 square miles (32 per cent) are actively cultivated.

Many geographic factors typical of the southern region also characterize the Northern Corn-Coconut region. There is less level land in the northern region; the small riverine floodplains and narrow littoral account for most of it. While annual precipitation is greater than in the southern region, the northern area also is subject to droughts. Transportation facilities are not as adequate as in the south, and the northern region lacks an adequate port. The only sizeable port is at Guihulngan where shallow-draft inter-island ships stop. The rest of the coast is lined with shallow inshore waters or offshore coral reefs.

Population densities are greater in the northern region with an average density of 289 persons per

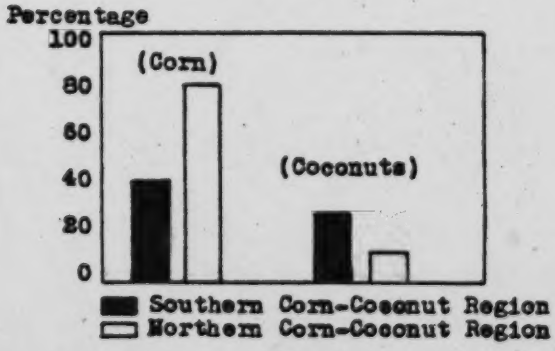
112

square mile, (in the south, 196 persons). The heavy pressure on the land has resulted in a constant westward push of the people, who cleared the steep slopes of their natural vegetation and planted the cleared land. This has resulted in a larger proportion of submarginal agricultural land than in the southern region. A greater proportion of the cultivated land is devoted to corn and a much smaller area is occupied by the principal cash crop, coconuts. Lacking an easy access to outside food sources and adequate transportation facilities for selling copra, the barriofolk of this region rely upon subsistence agriculture.

The difference between the Southern and Northern Corn-Coconut regions in regard to land occupied by both corn and coconuts is illustrated in Graph II.

GRAPH II

Percentage of Cultivated Land
Devoted to Corn and Coconuts
1950 — 51



Percentage of cultivated land in the northern region devoted to various crops is shown in Table XIII.[1]

1 [See p. 113, cat. 311 -- Analyst]

20: Hart E-5 (195.) 1954 OA1 Philippines
Central Bisayan OA.4

TABLE XII

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Percentage of the Land of Each Municipality Devoted to the Major Crops, 1950-1951 Northern Corn-Coconut Region[89]

Municipality	Corn	Coco-nuts	Sugar	Rice (a)	Roots	Vege-tables	Beans	Fruits
Canlaon (b)	80	*	*	15	2	*	1	*
Vallehermoso	81	8	6	1	1	1	*	*
Guihulngan	89	8	1	*	1	*	*	*
La Libertad	90	6	0	*	1	1	*	*
Jimalalud	80	8	4	3	2	*	*	*
Tayasan	79	8	4	4	2	*	*	*
Ayungon	77	9	*	9	2	*	1	*
Payabon	79	4	1	11	3	*	*	*
Manjuyod (b)	71	7	6	12	2	*	*	*

* Indicates less than 1 per cent
(a) Mostly upland rice
(b) Transitional municipalities

The percentages of land occupied by corn illustrate the dominance of this crop; in fact, nowhere else in the Philippines had corn captured the agricultural landscape so thoroughly as here. Less land devoted to cash crops, such as coconuts, reflects a greater need for food. More than 81 per cent of the cultivated land in this region is occupied by corn, and in some municipalities like La Libertad corn occupies 90 per cent of the farmed area.

Rice Regions of Negros

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Rice is not the dominant crop of Negros as in many parts of the Philippines. Of the total cultivated land in the archipelago 42 per cent is occupied by rice. Only 29 per cent of the total cultivated land of Negros is

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[89] Wernstedt, op. cit., p.128.

devoted to rice. About 12 per cent of the total cultivated land in Negros Oriental is devoted to rice while in Negros Occidental three times this amount (36 per cent) is occupied by rice. 311 243

Today Negros imports rice from Panay and Mindanao to feed its people. Spencer states: "The main sugar-producing area of Negros Island [Occidental province] and the whole island of Cebu are the chief deficit regions, with marked food shortages."[90] In the past, however, Negros was a rice surplus area. Miguel de Loarca wrote in the latter part of the 16th century that northern Negros was "rich in foods, such as rice." Legaspi's account of Negros states: "Rice which is the bread, grows in abundance."[91] Negros' shift from a rice surplus to a deficit was largely the result of the great expansion of sugar cane acreage and to the associated increase in population.[92] Negros is capable of raising sufficient rice for its population with improved agricultural practices and increased irrigation. 433 438 311 243

More than a thousand varieties of rice are grown in the Philippines. Many varieties are old established rices while others have been introduced from the United 243 177

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[90] Spencer, op. cit., p.72.

[91] Miguel de Loarca, Blair and Robertson, op. cit., V, p.47.

[92] Wernstedt, op. cit., p.190.

States, Italy, Spain, Iran, and southeast Asia. "About one hundred of the older varieties and four or more of the recent introductions are grown commercially [in the Philippines]."[93] There are four major categories of rice in the Philippines: irrigated lowland; non-irrigated lowland; palagad ("dry season rice"); and upland rice.[94] In Negros 59 per cent of the rice land is occupied by either irrigated or non-irrigated lowland rice.

Most of Negros' irrigated rice land, about 7,000 acres, is located near the coast, normally on river deltas where the waters are easily diverted. Exceptions include the Canlaon plateau where, at an elevation of nearly 1,000 feet, about 2,500 acres of rice land are irrigated by streams which originate on nearby volcanic peaks. Most of the lowland non-irrigated rice land is found along the flood plains. These are areas which cannot be irrigated due to lack of capital or technical difficulties.

Lowland rice usually is planted in Negros between June and August, although the dates vary slightly due to early or late start of the rainy season.[95] Non-irrigated

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[93] Uichanco and Sacay, op. cit., p.2.

[94] Palagad is the second rice crop a farmer tries to raise in one year from a usually, but not necessarily always, irrigated paddy. Cultivation practices have created two subtypes of upland rice agriculture: one where the fields are plowed for planting and the other where the rice is planted with a dibble stick.

[95] Hainsworth and Moyer, op. cit., p.53. These months appear to be the general planting and harvesting dates for rice in the Visayan Islands.

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lowland rice is more dependent on the southwest monsoon than is irrigated rice. There are several good size Negros rice haciendas located at Sipalay, Kabankalan, and Himamaylan, where some mechanized equipment is used. The majority of the paddies, however, are planted by farmers who use wooden plows, carabaos, and the labor of their families. Since the planting of rice in Siaton appears to be quite similar to practices for Negros as a whole, the detailed discussion of this subject will be deferred until Chapter IV.

Macan-Pina and Apostol, early maturing rice varieties, are most common in northern Negros in order to secure a palagad crop after the first rice harvest. Calawa, Raminad #3, and Aposta, medium-maturing rices, are most popular in the central plains of Negros Occidental while in southwestern Negros late-maturing varieties like Seraup-Besar and Klon-Klon are favored. The growing season of the rice planted in Negros varies; the early-maturing rice variety takes about 135 to 165 days to mature, the medium-maturing, from 170 to 190 days, while the late-maturing from 190 to 200 or more days after transplanting. Harvest of the first rice in Negros begins in October or November. The palagad crop is usually planted between December and January and harvested in March and April.[96]

[96]Only a few hundred acres of palagad are grown in Negros, mainly in the municipalities of Bago and Canayan. Cotsian and Klon-Klon are the two most common rices planted; they yield about 17 bushels per acre.

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Upland rice occupies 27 per cent of the total land devoted to rice in Negros. Several fairly large upland rice haciendas are located in Silay, Talisay, Bago and Bacolod municipalities. The most frequently planted rice varieties in plowed upland localities are Magsanaya, Lubang, Guinatus, and Cotsian. However, most rice is grown on the small holdings of individual farmers. Nearly all of the rice planted in caingins is grown in the Central Mountain range or its piedmont areas. In Siaton, as elsewhere, many of the lowland barriofolk have small caingins in the nearby hills.

About 89 per cent of the total rice land in the island is located in Negros Occidental; of this 80 per cent occurs in the western coastal lowland rice region. This region includes the municipalities which border the western coast of Negros, from Saravia to Cauayan, with the five nearby municipalities of Murcia, La Carlota, La Castellana, Magallon, and Isabela. Wernstedt estimates that about 67 per cent of Negros' total upland rice is grown in this dominant rice region.

The six most common lowland rice varieties in this western coastal rice region are Raminad #3, Calawa, Aposta, Seraup-Besar, Elon-Elon, and Khao Bai Sri. The average yields vary from 29 bushels per acre in the northern half of the region (from Saravia southward to Pulupandan) to 33 bushels per acre in the southern portion. The yield of upland rice is about five bushels

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less per acre than lowland rice. Most of the rice in this western region is grown by tenant farmers on small holdings.

While most of the rice of Negros is grown in the western province, there are many small rice-producing areas in the island located on small riverine plains. These areas are relatively isolated and have become self-sufficient farming centers with most of the rice grown consumed in the area. Sipalay and Asia are examples of such rice-producing riverine plains; they have approximately 11,000 acres of lowland rice.

Tolong is known as the "Rice Bowl of Southern Negros." In 1952 this municipality planted about 11,000 acres in rice.[97] The Tolong lowland extends from the Sicopon to the Bayawan rivers; the local agriculture agent reports that it contains more than one-half of the municipality's rice acreage. Extensions of this lowland to the northeast, known locally as Taboan and Lopay, were opened for farming six or seven years ago and are said to be promising new agricultural regions. The two most common rice varieties planted in Tolong are Macan and Lubang (or Lubang Puti). Lubang Puti (Puti means "red") is widely grown in southern Negros and parts of Siquijor, being a versatile rice which can be planted in lowland as well as upland and also for palagad.

97"Production Data by Municipalities. Crop Year from July 1, 1951 to June 30, 1952." Dumaguete, Negros Oriental, Provincial Agriculture Office. Typescript.

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The yield ranges from 24 to 30 gavans of palay per hectare.[98]

Small rice-producing regions of Negros Oriental are such localities as Canaway (Siaton), Mayabon (southwestern Zamboanguita municipality), the Tanjay River area in Bais and Tanjay. These regions have from several hundred to two or three thousand acres of rice land. For most of the people of Negros Oriental, rice is a luxury food. Only the better-to-do eat rice daily; the average barriofolk eat rice only for a month or two during the year and on festive occasions. Very little rice grown in these areas enters the commercial trade of Negros.

P 249 .93

Sugar Regions of Negros

Before World War II sugar was the most important export crop of the Philippines. Approximately three-fourths of the crop was sold to the United States. In 1951-52 the Philippines supplied almost 3 per cent of the total sugar cane crop of the world. Since the war copra has outranked sugar as the principal cash crop due to the widespread wartime destruction of sugar extracting and refining facilities. Sugar cane cultivation was a pre-Spanish activity in the Philippines, when Chinese merchants exported sugar to China. By the end of the

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[98] One gavan of palay (unhusked rice) equals 44 kilos or 97 pounds while a gavan of clean rice equals 57.5 kilos or 127 pounds. A hectare is 2.47 acres.

part, the planters receive 60 per cent of the sugar obtained from the cane while the mills retain the remainder. In 1952 there were twelve sugar cane mills operating in Negros with only one in Negros Oriental (Bais). 249 257

At Victorias the workers are provided with squat cement houses with running water and electricity. Victorias is a small city with a church (one of the most dramatically modern structures in the Philippines), stores, hospital, recreational facilities, and schools. The general standard of living of the mill workers is much higher than that of the average farmer of Caticugan. Mr. Frederico Ossorio, General Manager of the Victorias Milling Company, has initiated a cooperative vocational school, and other programs to encourage community development and leadership among the workers. 257 361 [511] [874]

Negros' major sugar region begins in the south with Ilog and continues northward and eastward along the littoral. (See Plate XVI.) This region has been divided into the northern and western subregions. On Negros' eastern coast there are two small sugar cane districts, San Carlos and Bais. The sugar cane regions and the plains of Negros coincide closely. (See Plates V and XVI.)[1] 311 249

Wernstedt reports: "The western sugar subregion is the most important sugar-producing region on Negros Island, and the most important single sugar-producing

1 [See pp. 38+105, cat. 311+249 -- Analyst]

region in the Philippines. Here more than 160,000 acres of land are devoted entirely to sugar cane."[101] Table XIII gives the percentage of land devoted to different crops in the western sugar cane subregion of Negros Occidental.

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TABLE XIII

Percentage of Land of Each Municipality[102] Devoted to the Major Crops, 1950-51 Western Sugar Subregion

Municipality	Sugar Cane	Corn	Coconut	Rice (a)	Vegetables
Saravia	73	8	*	18	*
Silay	48	12	1	38	1
Talisay	55	14	3	27	1
Bacolod City	42	6	9	41	2
Murcia	47	11	*	39	3
Bago	28	3	1	67	3
Pulupandan	56	1	5	33	5
Valladolid	8	1	2	88	1
San Enrique	21	2	4	72	1
La Carlota	67	8	0	22	3
Pontevedra	44	2	1	51	2
La Castellana	46	9	1	41	3
Isabela	41	8	1	48	2
Hin.garan	28	8	2	59	3
Binalbagan	41	9	1	45	4
Himamaylan	23	5	7	62	3
Kabankalan	31	6	1	59	3
Ilog	37	8	5	48	2

(a) Indicates both upland and lowland rice
(*) Indicates less than 1 percent

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The western subregion with its seven sugar districts produced 43 per cent of the entire Philippine sugar cane

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[101] Wernstedt, op. cit., p. 183.

[102] Wernstedt, op. cit., p. 183. Separate figures for the newly-created Magallon municipality (June 6, 1951) are not given for when these were compiled Magallon was not separated from Isabela.

20: Hart E-5 (195.) 1954 OA1 Philippines
Central Bisayan OA14

in 1950-51 or nearly 64 per cent of the total Negros crop.

Wernstedt aptly describes the general landscape of western Negros:

> The sugar lands of Negros present much the same landscape picture wherever they are encountered. In many respects they are more reminiscent of the wheat lands of Midwestern United States, than those characteristic of the Orient. Extensive rolling fields are covered with waving cane, looking not unlike waving wheat from a distance. Modern farm machinery can be seen at work in the fields, small cross-road villages house the agricultural workers, and large gleaming factories dot the landscape like Midwestern grain elevators. All look somewhat incongruous amidst the intensively cultivated rice paddies dotted with lumbering carabaos pulling wooden plows through the fields.[103]

This chapter has aimed to survey the general features of Negros' cultural landscape with emphasis on those factors that highlight the position of Siaton municipality and Caticugan. Caticugan is one of more than 300 barrios of Negros Oriental, located in a relatively sparsely settled part of the Southeastern Coastal lowlands. The barriofolk are subsistence farmers whose major crop is corn, although some rice is raised. The western province of Negros is primarily a sugar cane and rice area, with more people, urban settlements, transportation facilities, and modern agricultural methods. The people of Caticugan live outside the cash economy of Negros' sugar haciendas and centrals. Besides

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[103] Wernstedt, op. cit., p.186.

20: Hart E-5 (1951) 1954 OA1 Philippines
Central Bisayan OA14

CHAPTER IV

THE PRACTICE OF AGRICULTURE

The barriofolk of Caticugan are subsistence farmers.[1] Most of their fields are so small that they might be better called gardeners. Yet their relationship with the land is not as intensely intimate as that of the Chinese or Japanese farmer. If the man-land relationship in China, for example, may be roughly characterized as a grim battle with an ever-constant threat of famine, the relationship in Caticugan is a persistent yet more amiable struggle. The careful hand-tillage and the planting of every tiny plot of land, as in most parts of China or Japan, does not occur in Caticugan. The pressure of the people on the land in Caticugan is less severe than in other parts of Asia or the Philippines.

This chapter describes and analyzes the agricultural practices and associated practices of Caticugan barriofolk. If any one chapter in this report highlights the general contours of living in Caticugan it is this. For, in many ways, the agricultural practices of the barriofolk embody the general ethos of their culture.

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[1] Caticugan includes Sitios Naga, Dangola and Talo-ot; when reference is made to Barrio Caticugan it does not include these three sitios, only the barrio proper as the people call it.

20: Hart E-5 (1951) 1954 OA1 Philippines OA1
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Their fields are plots once cultivated by their ancestors; it is their meager inheritance of security that they will transfer to their children. The staple--corn--that keeps them alive comes mainly from their land. Their agricultural practices are interwoven with rituals that reflect their concept of the supernatural. For the barriofolk of Caticugan their fields are their life; and most of their lives are spent plowing, harrowing, planting and harvesting their crops.

HISTORICAL SUMMARY OF PHILIPPINE AGRICULTURAL LAND USE

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The history of agricultural land use in the Philippines is that of five major agricultural systems.[2] These systems are: (1) intensive highland irrigated terraces; (2) lowland intensive agriculture; (3) kaingin; (4) plantations; and (5) commercial mechanized agriculture. The evolution of the last two types of agricultural systems in the Philippines is easier to trace that that of the first three types, which developed during prehistoric eras. Preceding these five systems of land use were pre-Neolithic hunting and foodgathering but "their impact upon the environment was minor and temporary."[3]

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[2]The material on the development of agricultural land use patterns in the Philippines is summarized from Spencer, op. cit., pp. 4-12.

[3]Spencer, op. cit., p. 3.

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The rice terraces of northern Luzon, around Sagada or Banaue, are widely known. The importance of these terraces as a system of land use has been over-emphasized; the unique characteristics and almost awe-inspiring engineering techniques of the builders have led many writers to overstress them in relation to the total agricultural situation in the Philippines. These irrigated highland terraces cover only 2 per cent of the landscape of northern Luzon and the standard of living of their cultivators is relatively low for the Philippines. Moreover, rising labor costs almost prohibit extension of these terraces.

The highland terraces were developed more than 2,000 years ago by people from northern Indo-China and south China. Besides the technique of terracing and rice cultivation, these immigrants brought with them knowledge of bronze and gold working, the pig, and millet and other minor crops.

In the central and southern regions of the Philippines two types of land use developed during the late Neolithic period. The moist margins of the lowlands, especially in and above alluvial estuaries, were used to grow rice, taro, nipa palm and other related plants. In association with this truly aquatic lowland agriculture were moist lowlands where in addition to the foregoing crops there were "jungle-like garden plantings" of coconut, banana, breadfruit and other tropical plants. Coupled with this type of agriculture was "extractive

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range stripping" in which the people gathered wild forest products from the jungle land and swamp fringes. These farmers also utilized sea products. Their agricultural techniques utilized a greater range of opportunities than was possible under either caingin or irrigated highland terrace agriculture.

This intensive lowland agriculture was accompanied by the cultivation of land away from the aquatic littoral and its moist margins.

> In earlier periods perhaps no clearly defined boundary between the two types could be distinguished. The lack of direct sea contact and the absence of swamp-margin aquatic culture are obvious. When elevations increase, lowland crops and auxiliary plants drop out one by one, leaving no clear boundaries.[4]

It is probable that "shifting" or caingin agriculture developed side by side with lowland cultivation. Caingin agriculture utilized uplands and mountain slopes; it spread inland from the coasts and upward in the interior highlands with increase of population. More recently in the Visayas the constant raids of the Moros influenced this spread of peoples into the interior. Caingin agriculture still is practiced by a considerable number of both pagan and Christian Filipinos, although it is an illegal method of land use.

The introduction of new domesticated plants, population increases, market-bartering, and international trade all modified both lowland and caingin agriculture;

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[4]Spencer, op. cit., p. 7.

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[4]Spencer, op. cit., p. 7.

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they initiated changes in farming methods and augmented the importance of cash, trade and export crops.

The plantation system introduced by the Spaniards in the latter part of the 19th century stressed coconut, tobacco and sugar cultivation. Under the Americans the plantation system was intensified and abaca and pineapple were added to the crops.

Commercial mechanized agriculture, the fifth system, is basically an American innovation applied to plantations and smaller private holdings both in newly-developed areas and in older cultivated regions. This system, however, is not widely distributed or intensively used due to problems that involve terrain, lack of capital and trained operators. Additional hindrances to mechanization of farms are lack of adequate fuels and the fact that little farm machinery is manufactured in the Philippines. Some Filipinos, however, have speculated on the possible use of local fuels such as coconut oil or alcohol.[5]

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Since the barriofolk of Caticugan are subsistence farmers, they sell very little of their corn and rice. Rice is less important than corn since many of the farmers have no paddies. The dominance of subsistence agriculture characterizes the people living in barrios in the Siaton

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[5]Ortigas, op. cit., pp. 44-51.

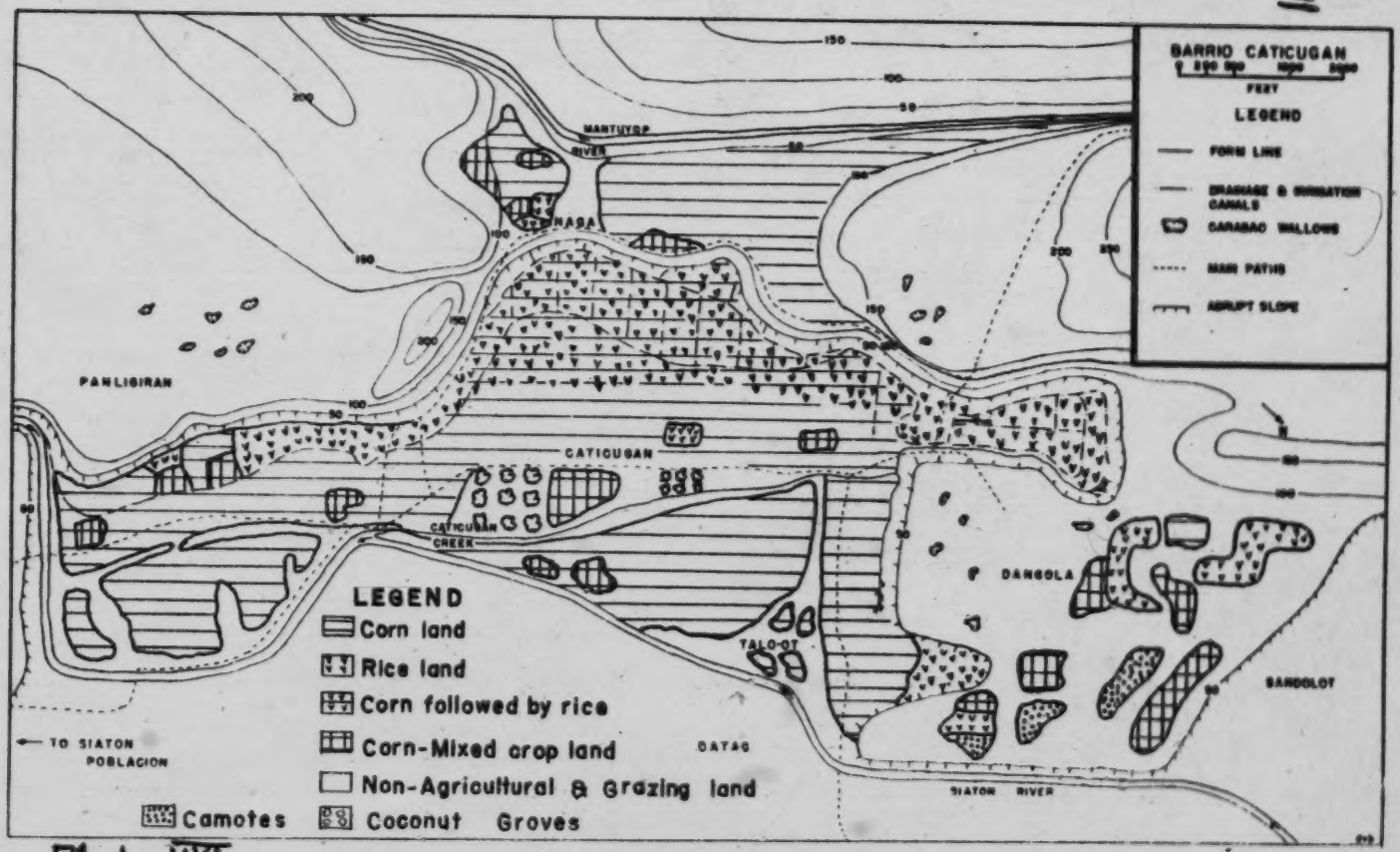

Plate XXI

LAND USE (1951)

20: Hart E-5 (1951) 1954 OAI Philippines Central Bisayan OA14

little each year due to seasonal climatic fluctuations but the general pattern remains basically unchanged. 221 241

CAINGIN AGRICULTURE: INTRODUCTION

Four of the five Philippine methods of agricultural land use are practiced in Negros. There are no extensive areas of terraced land, although some terraces are found in Siquijor Island. The three most common agricultural systems in Negros are lowland intensive, plantation and mechanized agriculture--the latter in conjunction with sugar and rice plantations. Caingin agriculture is practiced by both pagan and Christian Filipinos in the piedmont regions of the Central Mountains, the Central Mountain Range, and the Tablas plateau. 241 311

Caingin shifting agriculture has been defined tersely as:

> "...the most primitive type of agriculture...an economy of which the main characteristics are rotation of fields rather than crops; clearing by means of fire; absence of draft animals and of manuring; use of human labor only; employment of the dibble stick or hoe; short periods of soil occupancy alternating with long fallow periods."[7]

Caingin is not always limited to hills and uplands as typical in Formosa, Indochina, Thailand and the Philippines. Frequently, as in Indonesia, this land use technique occurs on level areas. Pelzer states:

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[7]Pelzer, op. cit., p. 17. Pelzer has written an excellent account on Caingin agriculture in the Philippines: Chapter 2: "The Shifting Cultivator."

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> Shifting cultivators have no concept of private land ownership. The land belongs to the community, the tribe, or the village, and each member has the right to use as much land as he needs and can cultivate.[8]

The barriofolk of Caticugan are not true shifting cultivators since one must distinguish between shifting cultivation as a "land use" technique and shifting cultivation as a lebensform. Agriculture with long fallow periods for the fields does not make farmers into caingin cultivators in the strictest sense of the word if they do not practice the associated customs. There are tobacco plantations on the east coast of Sumatra which use a long fallow period (seven to eight years) but the cultivators do not practice caingin agriculture. The barriofolk of Caticugan and probably most of the people living in the settlements in the Siaton River valley are not true shifting cultivators. They find that their lowland fields are not sufficient and supplement crops from their "permanent fields" by cultivating upland caingins.

The cultivators of caingins in Caticugan claim ownership of the land they till. True shifting cultivators, as already mentioned, have no concept of private land ownership. The caingins of Caticugan are taxable property and many are listed in the land ownership record books of the municipio. Suitable land for caingins is distant from Caticugan; this makes it difficult for one

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[8] Ibid., p. 18.

household to manage both barrio lowland fields and upland caingins. Several families solved this problem by having their caingins worked by tenants who lived near the fields. Though caingins are considered as private property by most of their cultivators, many customs connected with shifting agriculture appear here.[9] 24| 311

Whether caingin agriculture preceded lowland cultivation in Siaton is not definitely known. It seems most likely, however, that the first settlers would utilize the riverine plains of Siaton, travelling to the region along the island's rim or by boat. Siaton's early history and the population distribution patterns supports this belief. The first settlements on eastern Negros mentioned in Spanish sources were located on the lowlands of Bais and Tanjay. (See Chapter III.) Certainly the Moro raids later influenced the settling of the interior mountainous regions of Siaton and the spread of caingin agriculture.

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[9]Since there were no caingins near Caticugan I was not able to observe closely this type of agriculture. A number of visits were made to areas where caingins were located and their cultivators were interviewed. Most of the information was obtained, however, from people who once worked in caingins, from a few Caticugan farmers who had caingins in the hills, and by questioning several caingin farmers in the northern part of the Siaton River valley. The amount of information obtained by actual observation was smaller than in the study of lowland agricultural activities.

same methods used in the lowlands. The harvesters normally get one-fourth, sometimes, but rarely, one-third of the rice harvested. 243

A very limited survey, so restricted in nature as to be merely suggestive, was made of seven caingins. The average corn yield per acre of these caingins was five bushels.[15] This figure is for the first corn harvest that usually yields more than the second crop. Three of the seven caingins were damaged by wild pigs and monkeys, suggesting the problem these pests present to the farmers. Dong-go was planted in all the caingins except two which grew Bagsiao. The caingins were located in sitios Kangotot and Nawakat (Casala-an), Casala-an, Dolog, and Bantolinao and Sitio Banat-e (Maloh). 241 311 433

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[15]The conversion was: one cavan of shelled corn equals 58 kilos and 1 kilo equals 2.2 pounds. One bushel of ear corn (not shelled corn) equals 52 pounds. To determine the size of caingin or lowland corn fields the following method, recommended by the provincial agricultural office, was used: "With reference to your letter...regarding rate of planting corn, please be informed that the rate varies according to the number of grains dropped per hill and the distance of planting corn. We noted that if the distance of planting is 80 x 80 cm. dropping 4-5 grains per hill the rate of planting is around 6 gantas per hectare, especially if the grains of corn used are small. By dropping only three grains per hill at a distance of 1 M. x 80 cm., especially if the grains are big, the rate of planting per hectare of corn is only around four gantas. But by dropping three grains per hill at a distance of 1 meter by 1 meter, if the grains are medium size, the rate of planting is only five gantas per hectare. So on the average we use five gantas per hectare as the rate of seeding corn regardless of the size of the grains and the distance of planting and the rate of planting per hill..." Personal communication to writer from Provincial Agricultural Supervisor, February, 1951, Dumaguete, Negros Oriental.

LOWLAND RICE

Introduction

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When the Spaniards first visited Negros in the middle of the 16th century Filipinos were cultivating rice. Probably rice had been brought to the Philippines by nameless wanderers from Indo-China or south China in the late Neolithic period. The distribution of lowland rice in Negros and Siaton municipality has been described. As one travels up the Siaton River valley, the cultivation of lowland rice disappears north of Barrio Sandolot where there are only a few pilapils (rice paddies).

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The Agricultural Calendar (pages 273, 274, 275, and 276)[1] does not present a sharp picture of farming activities. Table XV presents a more detailed account of the planting and harvesting of rice and corn, the two major crops of Caticugan

TABLE XV

AGRICULTURAL CALENDAR FOR RICE AND CORN
CATICUGAN, 1951

CROP	PLANTING BEGAN	PLANTING FINISHED	TRANSPLANTING BEGAN	TRANSPLANTING FINISHED
	Rice Seed Beds			
Lowland rice	June 19	July 14	August 22	September 26

1 [Category 116 -- Analyst]

TABLE XV (cont.)

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CORN	PLANTING BEGAN	PLANTING FINISHED	HARVEST BEGAN	HARVEST FINISHED
First irrigated corn	March 7	April 23	May 28	July 9
Second irrigated corn	June 19	June 25	August 27	September 2
First dry corn	April 27	May 12	August 4	August 29
Second dry corn	October 5	November 23	See Footnote 23	See Footnote 23

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The most popular rice variety planted in Siaton is Macan Sta. Rosa.

> The Macan Sta. Rosa is grown on a large scale in Nueva Ecija and Bulacan [provinces in Luzon]. It matures in about 180 days, giving an average production of about 60 cavans per hectare [or 24 cavans an acre]. It turns out a first-class rice of good eating quality.[24]

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Records of the provincial agricultural office in Dumaguete show that more than 75 per cent of the total acreage devoted to lowland rice in Siaton municipality is planted with Macan Sta. Rosa.

Table XVI[1] gives the varieties and acreage of lowland and upland rice planted in Siaton municipality in 1951, according to the Provincial Agriculture Office of Dumaguete.

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[23] The exact dates for the rice and the second non-irrigated corn harvests are not given since I arrived after the former was nearly finished and I left before the latter began.

[24] Uichanco, op. cit., I, p. 4.

1 [See p. 302, cat 245 or 311 -- Analyst]

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TABLE XVI

VARIETIES AND ACREAGE OF LOWLAND AND UPLAND RICE PLANTED IN SIATON MUNICIPALITY, 1950

RICE VARIETIES	ACRES
Lowland	
Macan Sta. Rosa	650
Kinamayon	5
Apostol	42
Careret (local variety)	148
	845 total
Upland	
Tinogbong	289
Magsanaya	7
	296 total

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The section on caingin agriculture indicates that a number of rice varieties planted in Siaton municipality are unknown to the provincial agriculture office, at least in 1950. However, the variety of rice most commonly planted in the caingins, according to my informants, is Tinogbong.

None of the Caticugan farmers planted Kinamayon, Apostol or Careret rice; nearly all of them planted Macan Sta. Rosa. A few farmers planted glutinous rice varieties (pilit is the common name) called Bodbodron and Kilikot. An early maturing variety, Pinili-an, was planted only in Sitio Dangola; some Mimis, an aromatic variety that matures in 185 days, was planted in Dolog.[25] The land

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[25] Uichanco and Sacay, op. cit., I, p. 12.

devoted to upland and lowland rice in Siaton increased The land from 1,141 acres in 1950 to 1,260 acres in 1952. 243 [311]

Preparing and Planting the (Saboda) Rice Seed Beds 243

There are certain soil requirements for the rice seed beds. A sandy loam is preferred by the farmers. Soils with large amounts of clay are undesirable since they make it difficult to pull seedlings without damage. The seed bed should not be rocky and is best located where there is no danger of flooding in case of heavy rains. If excessive water collects in seed bed the rice rots.

Once the seed bed is selected the ground is plowed and harrowed until the soil is quite fine. Several informants said the bed is plowed and harrowed four times but this is not always done. Large clods and stones are removed by hand and the seed is sown broadcast. Some farmers, however, make small furrows with a small pointed stick and plant the seeds in furrows, a method called tudlis. The bed is fenced to keep out farmyard animals. Soil preparation and fence construction are done by men and young boys; usually the women plant the seed.

One seed bed was made in a corner of an irrigated field of growing corn in Barrio Caticugan. The lower leaves had been stripped from the corn so the seedlings could get more sunlight. These seedlings had been planted thus because the farmer had a paddy in Sitio Balsa where rice is transplanted earlier than in Caticugan.

stump in the center. Bunches of rice stalks, about two handfuls, were slightly leaned against the base of the stump. The stump was encircled in this manner with "rings" of rice. One "ring" or layer was placed over another and stacks six or seven feet high were made. No rice stacks were seen in Caticugan in 1951. The barrio-folk said tumpils were only memories of the past when the rice harvests were more abundant. I did see rice stacks built around a center bamboo upright in other parts of southern Negros.

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Paddy Sizes and Yields in Caticugan and Environs

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While municipal land records were studied, a personal survey was made in Caticugan to check the figures obtained from these records as to size of paddies, also to get additional data on yield, residence of owners and tenancy rates.[33] Few farmers know the acreage of their fields. The method of determining field sizes has already been described. I had mimeographed forms made of the land records and

[33] Rural land records in the Philippines are not noted for reliability; this is true for other Asian countries such as Japan. Vide Richard K. Beardsley's review of The Japanese Village in Transition, in Pacific Affairs, XXIV, No. 4 (December, 1951), pp. 428-30. There have been no cadastral surveys in Siaton municipality. Recently the land records of Negros Oriental were rechecked to improve their accuracy. However, the "inspectors" are said to have been the local supporters of provincial politicos and the program occurred suspiciously close to an election.

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transferred the data from these records to my forms. All land records for the barrios in the Siaton River valley were copied.

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I interviewed about fifty families--about 40 per cent of the families resident in Caticugan. Of course, not all of the people living in Caticugan own or till paddies. Of the families interviewed, figures were obtained for twenty-six individual paddies from twenty families; other families did not cultivate any paddies. Six of these paddies were located outside Caticugan so they were eliminated. Of the twenty paddies, totaling nearly 25 acres, all were planted with Macan Sta. Rosa except one farmer who had interplanted a glutinous variety.

Another survey was made of lowland rice paddy sizes and yields in Sandolot and Datag to obtain comparative data. Seventeen families living in Datag and fourteen in Sandolot were interviewed. Their paddies, totaling 61 acres, were all planted with Macan Sta. Rosa, except one paddy planted with Lubang. According to the municipal land records the average size of the rice fields in Caticugan is .99 of an acre while my survey arrived at the figure of 1.1 acres. The average paddy in Sandolot-Datag was slightly larger--1.6 acres. In 1952 Siaton's average rice yield per acre was 891 pounds; for Caticugan, according to my survey, the yield was only 553 pounds per acre. The Sandolot-Datag average rice yield was lower than in Caticugan; 337 pounds per acre. These figures support the opinion that of all the rice fields seen in the Siaton

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River valley, Caticugan's paddies looked the best. There is little doubt in my mind that the rice yield per acre for Siaton municipality in 1952, as estimated by the local agricultural agent, was too liberal. For example, the average rice yield in 1952 for the southern municipalities of Negros (Valencia to Tolong) was 774 pounds per acre.[34]

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According to Siaton's municipal land records, 122 acres of land are planted with lowland rice in Caticugan. This acreage is owned by 136 different individuals of whom 49 per cent live in Caticugan. Of the remaining owners 16 per cent live in Siaton poblacion, 10 per cent in Mantuyop, 8 per cent in Sandolot, and 6 per cent in Datag with several owners living in Inalad, Salag, and Maloh. More than half of the owners of ricefields in Caticugan do not live in the barrio, although they cannot be called absentee landlords in the strict sense. Many of these owners cultivate fields in Caticugan, bringing their plants from seed beds in their barrios.

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While the records indicate that the 122 acres of paddy in Caticugan are owned by 136 different individuals, the actual number of owners is much larger. Many a paddy is owned jointly by brothers and sisters. Sometimes the land records indicate this fact by stating that

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[34] These figures were obtained from an unpublished report of the Provincial Agricultural Office, Dumaguete, Negros Oriental, 1952.

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Central Bisayan OA:4

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the land is owned by the person listed and his or her "heirs" or "brothers." For example, one paddy in Caticugan, inherited on the death of a parent, is owned jointly by seven brothers and sisters. The land records often do not indicate these facts of ownership because the land continues to be registered under the name of an owner dead many years. Heirs often fail to change the land registration records at the municipio due to the small fee charged for the service.

Of the individuals interviewed during the survey in Caticugan, 50 per cent owned their ricefields, 37 per cent were tenants and 13 per cent owned some paddy and tilled others as tenants. In Sandolot-Datag area, of the thirty-one families interviewed, 74 per cent owned their ~~paddies while 26 per~~ cent were tenants. In order to obtain as wide a sample as possible, I did not request these families to give data on all of the ricefields they cultivated, but obtained figures for just one paddy. Therefore, some owners may have been also cultivating paddies as tenants. Three of the tenants in Caticugan were farming paddies owned by either a wife's brother or mother; another worked a paddy owned by a mother's brother. In Sandolot-Datag three tenants had as landlords a sister's husband, father's brother, and a third cousin, respectively.[35] [602]

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[35] A recent survey of thirteen barrios states that 31 per cent of the landlords of tenants were related by blood or marriage to their renters. Rivera and McMillan, op. cit., p. 43.

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In Caticugan, Sandolot and Datag, the average share of harvesters was 10 per cent of the total rice harvest. This is smaller than the share harvesters receive on upland rice caingins, which is usually 25 per cent of the total harvest. However, harvesting caingins is harder work and fewer laborers go to these fields than to the more conveniently located, easier-to-harvest lowland paddies. Actually, this percentage would be slightly higher if the few paddies harvested without helpers had been eliminated from this survey. In Caticugan, four paddies were harvested without outside help. As noted previously, most harvesters, as one farmer said, "take pity" on people with very small paddies or harvests that have been decreased by pests or inclimate weather.

CORN

Introduction

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Siaton is a part of the larger Southern Corn-Coconut region of Negros where corn is the dominant crop. Corn meal is usually eaten three times a day. In 1952, 3,196 acres of corn were planted in Siaton municipality producing an average yield of 11 bushels. In the same year 20,344 acres of corn were planted in the seven southern municipalities of Negros Oriental (Valencia to Tolong) with an average yield of 8 bushels. Since the

end of the last war Negros Oriental has imported about 40 per cent of the corn consumed from Mindanao.[35] 243 311

Barrio Caticugan is unique in Siaton municipality since sections of corn land and paddies can be irrigated. Some barriofolk grow one, and often two, crops of corn in their paddies before the latter are transplanted. Land devoted to irrigated corn in Barrio Caticugan and the division between the fields planted both with rice and corn and solely corn are shown in Plate XXIII.[1] This limit is imposed by the land's elevation that makes gravity flow irrigation impossible farther east.

Barrio Caticugan's canals were built originally not as an irrigation system but to drain the boggy land so it could be farmed. In fact, the land west of the main path of Barrio Caticugan was so boggy that no corn was planted here until forty or fifty years ago. Many old residents of Barrio Caticugan remember when only rice was raised in the barrio. The canals were said to have been much deeper in the past; now they are only several feet deep. In some parts of Barrio Caticugan, such as the northwestern end, the canals are silting up and the land is becoming increasingly boggy. For this 243 312

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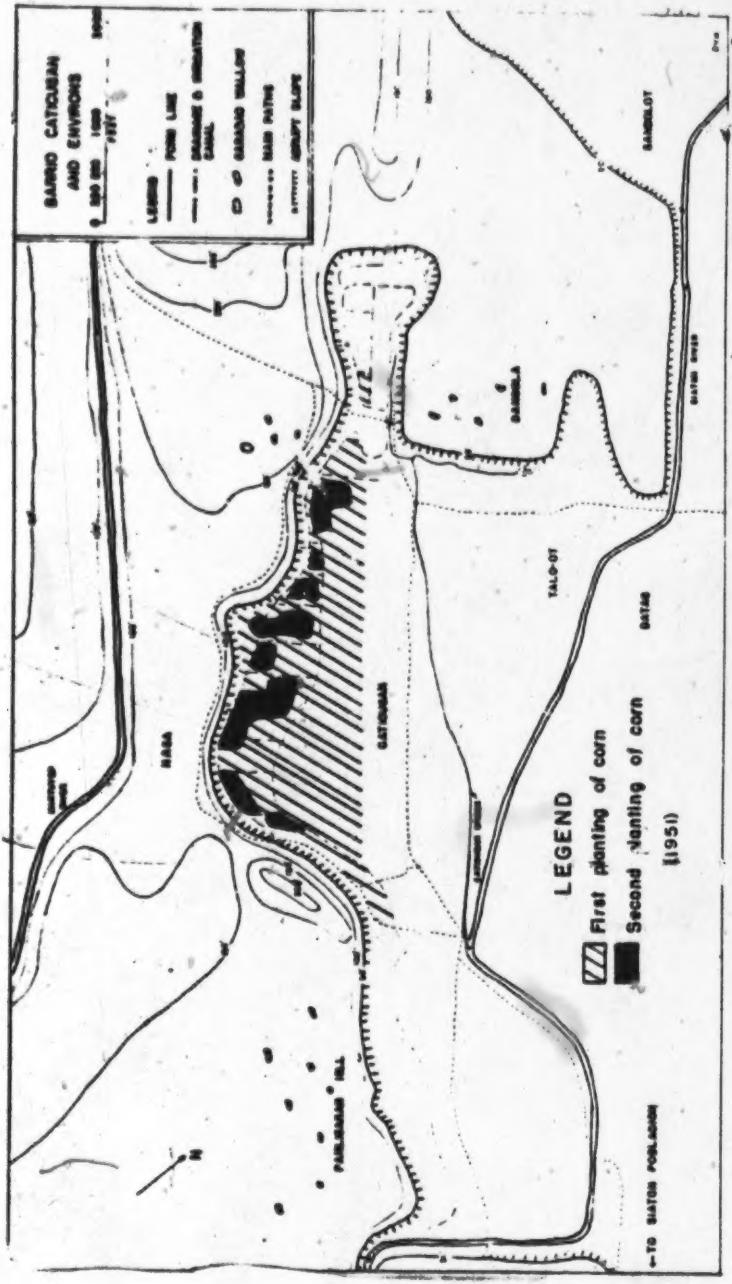
35 "Production Date by Municipalities: Crop Year from July 1, 1952 to June 30, 1953." Provincial Agricultural Office, Dumaguete, Negros Oriental, 1953. Typescript. Vide "Oriental Negros Expects Corn Increase," Philippines Free Press, XLIII, No. 30 (July 26, 1952), p. 22. This unsigned article stated that in 1952 the Department of Agriculture and Natural Resources estimated that only 17 per cent of the corn consumed in the province would be imported from Mindanao. An expected 23 per cent increase in the corn harvests because of increased use of fertilizers was anticipated.

1 [See p. 325, cat. 243 or 311 -- Analyst]


BARRIO CATUIGAN AND ENVIRONS
LEGEND
FORK LINE
MAIN PATHS
LEGEND
First planting of corn
Second planting of corn (1951)
LAND USE (IRRIGATED CORN)
PLATE XXIII
CATUIGAN
BANDILA
BANDILOT
TALO-OT
NAGA
PARLAGAN HILL
TO BATAD POBLACION

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3/2

P. 325

it is said if a field abandoned because of overflow of the Siaton River were later reclaimed, it was not necessary to resume the dulot even though "the field was once accustomed to it." This is the attitude of most barriofolk living in the Siaton River valley. Some of the fields in upper Naga are especially vulnerable to floods from the Mantuyop River since the bed is only five to ten feet below the level of the fields. Large boulders and other debris are deposited on the fields when the river floods, so reclaiming the land is difficult. Presumably when the fields were reclaimed the dulot was not resumed.[47]

It is somewhat easier to explain the present spatial distribution of the dulot in Barrio Caticugan. When Lucas Ege first purchased this land, he gave the fields southwest of the present main canal to the farmers who built and maintained a fence at the base of the bluff. This fence was necessary for there were many wild pigs, monkeys, and deer in the hills above. The fence protected he fields of the people living near the hills and those f Ege on the other side of the main canal.

[47]Part of upper Naga was once planted with rice. However, the cultivation of the land was stopped in the early 930's because it was believed "haunted" by spirits. One armer's three sons and his mother-in-law died of "fever nd headaches" while cultivating the land. Their deaths ere believed to be signs that the spirits who lived there id not wish the land to be farmed. The owner told me hat he was planning to "pray to God" and resume tilling he land, however, he did not farm the land during my resisnce. While the soil of upper Naga is not the best it is o worse than the paddies of Dangola. There is very little ultivation of Pangligiran hill for the same reason.

Cornfield Sizes and Yields

According to Siaton's municipal land records there are 580 acres classified as maizal (cornfields) in Caticugan, owned by 291 different persons. The records list 321 individual fields since some own more than one field; the average size was 1.9 acres. Of the owners of corn land 64 per cent live in Caticugan, 14 per cent in Siaton poblacion, 7 per cent in Sandolot, 5 per cent in Datag and 4 per cent in Mantuyop. The remaining owners live in Dumaguete, Zamboanguita, Maloh, Cabangahan, Omanod and Sta. Catalina poblacion. While 36 per cent of the owners of cornfields do not live in Caticugan, 51 per cent of the owners of paddies live in other communities.[51]

I made a survey in Caticugan to check the accuracy of the municipal land records and obtain additional data on tenancy. Ownership and tenancy figures obtained through this survey indicate that tenancy is higher for paddy than cornfields. Information gathered from this survey is given in Table XVIII.

TABLE XVIII

Percentages of Ownership and Tenancy of Caticugan's Paddy and Cornfields -- 1951

	Paddies	Cornfields
Owner	50	60
Owner-Tenant	13	27
Tenant	37	13

[51] These are approximate figures; field sizes may not be accurately recorded or may be in other sitios of Caticugan, a fact not always noted on the records. However, special care was taken to check as thoroughly as possible the actual residences and not to include fields in other sitios. I am grateful to the municipal treasurer, Ramon Regalado, and the chief clerk of the municipio, for assistance in this matter.

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I also made a survey of harvest yields and field sizes that included 51 acres of land--17 acres in Barrio Caticugan, 11 acres in Talo-ot and 23 acres in Naga. Caticugan's average yield for the first paddy and first non-irrigated crops was 6 bushels of corn per acre. The average size of the cornfields in Caticugan, based on this survey, was 1.2 acres while the average obtained from the land records was 1.9 acres. Several hundred husked cornears were measured from the second non-irrigated harvest of Barrio Caticugan; the average length of the ears was 2-1/2 inches. However, the second harvest from non-irrigated cornfields is usually smaller than the first harvest.

My survey included a small field in Barrio Caticugan where loose carabaos destroyed the crop and four fields in Naga, two in which the crop was damaged by wild pigs and two damaged by insects and floods. Total acreage of these fields was less than 5 acres; they were included in the averages for such incidents are fairly common. The survey's largest cornfield was 4-acre field in Talo-ot while the smallest was .3 of an acre. According to municipal land records the largest field in Caticugan was 27 acres (a field that had been divided among the heirs although the record was not changed) while the smallest field was .1 of an acre.

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In 1939 there were 47,440 farmers in Negros Oriental with 43.9 per cent owners, 12.1 per cent part owners, and 43.7 per cent tenants.[52] According to my surveys,

[52] Yearbook of Philippine Statistics: 1946, p. 138.

the sap begins to flow or the task abandoned as hopeless. A deep hole may be bored into the "eye" to increase the diminishing flow of sap.

As one travels up the Siaton River valley the buri palms decrease; at Dolog they disappear. The sap of the ediok palm (Cabo Negros: Arenga pinnata Wurmb (Miller)) is used to make a mildly alcoholic drink called habyob. The ediok produces large bunches of dates that hang on slender stalks from the top of the palm. A stalk is selected and then violently shaken and hit with a stick each morning until it flowers. Then the stalk's tip is cut and a bamboo container is attached at the end to collect the sap. The ediok's sap flows about the same length of time as the buri; tan-bark is also added to habyob for the same reason it is put in guhang.

MINOR SINGLE CROPS OF CATICUGAN

Spencer lists twenty-one different cropping combinations for the Philippines. Of these combinations six are chiefly lowland, eight chiefly upland, and seven are combined upland-lowland crop combinations.[59] The intercropping type typical of Caticugan is the "corn and minor crop" combination listed by Spencer under the combined upland-lowland category. The various cropping combinations in Caticugan are: (1) corn-peanuts; (2) corn-camotes; (3) corn-balatong (Cow peas: Vigna sinensis Linn.); (4) corn-balatong-cassava;

[59] Spencer, op. cit., pp. 11-12.

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(5) corn-mungo beans-balatong; and (6) corn-mungos. The important minor crops grown in Siaton municipality in 1951 and their estimated acreage are listed in Table XXI. The names and figures in this table were obtained from the local agricultural inspector of Siaton and include upland and lowland fields.

TABLE XXI

Important Minor Food Crops Grown in Siaton Municipality - 1951

CROP	ACRES
Root Crops	
Camote	166
Peanuts (Spanish White)	37
Cassava	32
Gabi (Colocasia esculentin Linn.)	7
	242 Total acreage
Beans	
Mungo (Yellow)	77
Cadios (Cajanus cajan Linn.)	12
Balatong (Sitao: Phaseolus vulgaris Linn.)	2
Others	12
	113 Total acreage

Intercropping in Caticugan depends upon a number of factors. First, soil types are of importance since camotes and peanuts require a well-drained clay-loam or sandy-loam soil. This is the reason that peanuts are planted only in a few parts of Barrio Caticugan. Camote patches in Naga are located on slopes for proper drainage.

Soil types do not fully explain intercropping in Caticugan. If cassava is planted with corn it is

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impossible to plant a second corn crop. By the time the first corn is harvested the cassava is so tall that the fields cannot be replanted until the cassava roots are dug. This is also true of camotes. Fields cannot grow two crops of corn if intercropped with cassava or camotes.

Intercropping is also discouraged by wandering carabaos and pigs. Less care is given to keeping farm animals, particularly pigs, penned during the period after the first corn harvest and before the second planting. Since many fields near the cluster of residences in Barrio Caticugan are not fenced, farmyard animals may damage immature crops growing in harvested cornfields. One cornfield intercropped with balatong beans was destroyed by stray carabaos. The balatongs were so badly eaten by the carabaos that the farmer plowed under the unharvested plants. A few farmers said they avoid conflicts with their neighbors over such matters by not intercropping their fields.

The Land Use map (Plate XXI, Page 272)[1] shows the clustering of intercropped fields in lower Naga. Soils do not prohibit the same intercropping patterns in upper Naga. The hills southwest of the Mantuyop River are wooded and thinly inhabited. At night wild pigs often cross the shallow river and push through the fences to forage in the fields. Because of the wild pigs' fondness for root crops, they are not intercropped with the corn. The Residence map (Plate XVIII, Page 131)[2] shows that few families live in this locality which makes it difficult for them to watch

1 [See cat. 311 or 116 -- Analyst]
2 [this plate is missing -- Analyst]

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their growing crops. Intercropping in Naga is concentrated in fields that are removed from the southwestern hills and where the residences are more abundant, making it easier for the people to guard their crops. Intercropping patterns in Naga reflect both geographical and cultural factors.

Intercropping depends upon another factor which is less tangible than soils, lack of seeds, maturity schedules, residence patterns, and wild animals. Perhaps the best explanation is the persistence of routine. When farmers were asked why more of them did not intercrop their corn fields they replied: "We are not used to it." Those who never have intercropped show little desire to do so, although the food supply of many families could be increased thereby.

In Dangola the soil is a coarse granular sandy loam which does not retain water. Consequently the people plant an early maturing rice. The Dangola paddies thus differ from those of Barrio Caticugan which accommodate a rice variety that is harvested in January. The well-drained, friable soil in Dangola is suitable for the production of camotes. There are also fewer residences in Dangola and less danger of the crop being destroyed by farmyard animals, and in no other part of Caticugan are sizeable fields devoted solely to camotes.

Camotes

The farmers offer three major reasons why so few camotes (amotes) are planted in Barrio Caticugan. First, to intercrop camotes with the first corn would make it impossible to plant a second crop. Second, between the harvest of the first and the planting of the second corn crops the barriofolk permit their pigs to roam the locality. The most desirable land for camotes, from an edaphic (soil) viewpoint, is unfenced cornfields near the residences. Third, since there are only a few camote fields in the community, cuttings are sometimes difficult to secure; one must go to other barrios or even to mountain caingins to obtain plants. The barriofolk often barter one-half a ganta of salt for as many camote cuttings as they can carry home.

Fields to be planted with camote cuttings are usually plowed twice; the final furrows are made in a grid pattern. After the heavy rains begin these furrows are replowed to increase their depth. Men, women and children plant cuttings in these furrows; there does not appear to be any division of this labor by sex.

Lihis for camote planting are normally done by the person inserting the cuttings in the field; no specialist is needed. Some barriofolk take three shells of the first hatching of a hen (turtle egg shells are better but more difficult to secure), a little sugar and lime (made from snail or sea shells), pieces from the winnowing basket, stone chips from the sog-ang (the three stones used

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greyish color and are usually very fibrous. Boiled camotes stuck on small bamboo sticks are often sold in Siaton's marketplace and small stores.

Cassava

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The so-called native cassava (balanghoy) was brought to the Philippines from Mexico during the early days of the Spanish regime. Varieties of cassava with commercial possibilities were not introduced into the Philippines until the American period. In some localities, like the Sulu archipelago, cassava is the staple food; in Siaton, however it is merely a supplementary seasonal food. The plant is cultivated by Filipinos for the tubers which store from 15 to 40 per cent starch. [146]

Only 32 acres of cassava were planted in Siaton municipality in 1951; very little was grown in Caticugan. [311] While three types of cassava are known and planted in the area--Visaya, Java and Australia--most of the cassava in Caticugan is Visaya. The Visaya variety grown in Caticugan may be Mandioca Sao Pedro Preto. The barriofolk report that Visaya cassava tastes better than the Java variety and contains more starch. [262] Australia cassava is reported to be grown mainly in Nasi-id and Bantolinao, sitios of Caticugan. Visaya cassava takes from ten to twelve months to mature, although the barriofolk of Caticugan dig immature roots after six months.

Two small patches planted solely to cassava in Caticugan were both in Naga. These patches were too

Balatongs are usually planted in every other cornhill, three to five seeds per hill. Some plant the beans in furrows between the hills because they say the fast-growing vines retard the growth of corn. In some cases the balatong spread so rapidly that the corn cannot be plowed for weeds. There are no special lihis for planting or harvesting balatongs. 241

In Caticugan balatongs are usually planted in May or June, the wet season, and harvested from October to December. The mature pods are put on buri mats in the sun to dry. The pods must be covered with cloth so the beans will not be dispersed when the pods shatter upon heating. When thoroughly dried, the remainder of the pods are shelled by hand and the beans stored. 241 251

Mungos

Four varieties of mungos are raised in the Philippines, differentiated according to the color of the bean.[63] The Dull Yellow type is raised in Caticugan. Very few mungos, however, are planted in Caticugan; in 1951, 77 acres of mungos were planted in Siaton municipality--an excessively high estimate of the local agricultural inspector. I have been in most of the larger cultivated areas of the municipality and rarely saw more than a few small patches of mungos. One reason for their scarcity is cost of seed. In the stores of Siaton poblacion, mungos were more costly than rice. 241 [311] [435]

[63] Uichanco and Sacay, op. cit., I, pp. 364-5.

Vegetables and Other Garden Crops

Vegetables approximate gubang as the most important source of cash income for the majority of families in Caticugan. The majority of barriofolk have a small home garden, plagued by insects, farmyard animals and lack of care. The gardens are rarely fenced. A number of families plant vegetables mainly for sale in the poblacion. Gardens are usually tended by women, who also sell the vegetables. In a recent descriptive account of a barrio in Bulacanan province, Luzon, this fact is stated indirectly:

> At Anilao [the name of the barrio] day begins in the night's small hours, when the men rise to go fishing...When the men return home at dawn, the women are up, breakfast has long been ready...All morning the men sleep, while the women work the vegetable gardens or gather grass to sell to rig drivers.[71]

Nearly every morning a few women from Caticugan could be seen carrying vegetables to sell to the poblacion.

Vegetable gardens often are planted on the canal banks in Caticugan. This location is considered desirable because the ground is usually moist and better drained during the rainy season when many gardens die of flooding. Pieces of thorny bamboo are put in the ground to support stringbeans, gourds and squashes. A few women hang strings of seaweed on the bamboo supports of the gourds and squashes; these are said to repel insects.

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[71] "Life in Barrio Anilao," Philippines Free Press, XLIV, No. 40 (October 3, 1953), p. 2e. This unsigned article consists mainly of photographs that present some realistic scenes of barrio life. Underlining in quotation by writer.

Shanghai and Cambodian varieties. In 1951 the same herd, owned by a Spaniard living in Bais, contained only seventy animals. The pre-war carabao level was not attained by 1953 in Siaton municipality. 231

In Caticugan there are fewer carabaos than before the last war but most families have an animal for agricultural work. Many families once had a few more head than were needed for farming purposes, and this surplus has not yet been replaced. One man rented a carabao for plowing his field, from a relative of his wife, for fifty cents a day. Most carabao in Caticugan are the native variety although there are a few pink-skinned Cambodian carabaos. Carabaos are required to be registered when two or three years old and their brand recorded at the municipio. The fee is fifty cents; consequently many owners do not obey the ordinance. As a result local figures are of little value in determining the actual number of carabao in Siaton municipality.

Pangligiran hill is the favorite place to graze Caticugan's carabaos. There usually are plenty of fodder and wallow holes for the animals and no immediate fields. The wooded hills across the Mantuyop River from Naga are another site where carabaos are taken to graze. Since the carabaos in these two localities are usually permitted to wander untied, they cohabit at will and no selective breeding is possible. 231 311

Calves are branded when they are about one year old. Young carabao are put to work in the fields when three or 231

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$2.50 fee connected with such title transfers; this discourages many heirs from making the title changes. Land records in the municipio are usually changed only when the land is sold and the title legally transferred.

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The constant subdivision of land in the Philippines among heirs has been condemned as one reason for the small size of farms. The Hardie report recommends that the "inheritance law respecting succession to agricultural properties should be modified" in order to prevent "fragmentation of farm units through succession."[13] This recommendation would be more appealing if the report had suggested means for achieving such a drastic innovation. If a field is too small to be economically divided among the heirs, Caticugan barriofolk have a number of solutions. First, the land may be sold to another person and the receipts divided equally among all heirs. Second, one heir may purchase the land and the money divided equally among the remaining heirs. Third, fields may be rotated among the heirs. For example, four brothers in Naga inherited a small field from their father. Instead of dividing or selling the field one brother tills the land each year and receives all the harvest. The next year another brother farms the land and so forth until each has had his turn.

In Barrio Caticugan there were individual paddies that were owned by as many as ten heirs. In Naga eight

[13] Hardie, op. cit., p. x. Vide Pelzer, op. cit., p. 11.

siblings owned one cornfield while seven owned still another field. It is for such reasons that the municipio land records do not accurately reflect the actual division of agricultural land in Caticugan. Usually such fields are listed under the names of parents or grandparents of the cultivators. Sometimes the land record merely states "Juan Cruz and heirs"; such fields are normally farmed under the arrangement described in the section on temporary division of fields. (See Pages 467-472.)

Fields are rotated sometimes while the actual owner is alive. In Barrio Caticugan a nephew was farming a small field owned by his childless aunt; he had agreed to work the field one year and the following year it would revert to his aunt. At the end of each harvest, however, the nephew made various excuses for breaking the agreement--"I shall work the field next year because this year's harvest was poor." His aunt never filed a formal complaint in Siaton municipio "because it is a small field and I do not want any trouble."

Movable Property

Animals may be rotated among the heirs like the fields. If there are three heirs and only one carabao, the animal may be sold to a stranger or to one of the heirs, and proceeds divided equally among all of them. An heir may keep a male carabao for one year, then pass the animal along to the other heirs; the carabao is

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produced in the Philippines. This type of land use is most common along the northern coast of Panay and the Cavite and Pampangan sections of Manila Bay. In Negros Oriental there are several hundreds of acres of fishponds south of Tanjay whereas other ponds are found in Manjuyod and between Guihulngan and Vallehermoso. There were no fish ponds in Siaton municipality.

The Bonsod (Fish Corral)

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Bonsods are a pre-Hispanic method of catching fish. Antonio de Morga describes a type of fish corral used by Filipinos living near Manila in the 17th century.

> The natives' [Filipinos'] method of catching them [fish] is by making corrals of bejucos, which are certain slender canes or rushes, solid and very pliant and strong; these are employed for making cables for the natives' boats, as well as other kinds of ropes. They catch the fish inside these corrals, having made the enclosures fast by means of stakes. They also catch the fish in wicker baskets made from the bejucos, but most generally with atarrayas [a type of fish net], esparaveles [a round fish net that is jerked along in shallow water], and other small barrederas, [a net with a tighter mesh than the usual type] and with hand lines and hooks...[36]

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[14]

Retana, who published an annotated edition of de Morga, speculates that the bonsod originally came from Borneo.

Fish corral varieties in the Philippines have yet to be thoroughly studied and classified. They vary in size and design, from small shallow-water corrals to

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[36] Antonio de Morga, Blair and Robertson, op. cit., XVI, p. 96. Povedano, writing in 1572, mentions the fish corrals of the people of Negros. E. D. Hester (ed.) The Robertson Text and Translation of the Povedano Manuscript of 1572. Transcript No. 2. Chicago, Philippine Studies Program, Department of Anthropology, University of Chicago, 1954, p. 48. Mimeographed. Unfortunately, this translation was not completed in time for me to use it throughout my report.